

REMARKS

The Examiner is thanked for the thorough examination of the present application. The FINAL Office Action, however, continued to reject all claims 1-4, 6-12, and 14-16. In response thereto, Applicants submit the foregoing amendments (in which independent claims 1, 9, and 12 are amended) and the following remarks. These amendments are made without prejudice, waiver, disclaimer, or dedication of the subject matter previously embodied in this claims. Further, the claim amendments are supported by at least Fig. 3 and paragraphs [0020] to [0024] of the original application. Accordingly, no new matter is added to the application by these amendments.

First, the Office Action continues to reject the claims based on a tenuous combination of five distinct references. Applicant continues to disagree with the propriety of this rejection, however, the Examiner has cited *In re Gorman* for the apparent legal proposition that “reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention.” Applicant does not believe this accurately reflects the holding in *In re Gorman*, or else literally hundreds of references could be combined to reject a single claim. In fact, the undersigned maintains that the proper and accurate state of the law is that, the more references that are required to form a rejection, the more tenuous the rejection becomes.

Therefore, Applicant maintains its previous arguments against the asserted combination. Nevertheless, the independent claims have been amended to even more clearly define over the cited art.

Claim Objections

The Office Action has objected to claims 1, 9, and 12 for certain noted informalities. Applicant has amended these claims to address and overcome the noted informalities. Accordingly, the objections should be withdrawn.

Rejections Under 35 U.S.C. 103(a)

The Office Action has rejected claims 1, 2, 4, 7-10, 12, 15, and 16 under 35 U.S.C. § 103(a) as allegedly being unpatentable over the combination of Antoniak (US 2003/0152140), Isley (US 5,930,295), in view of Robinson (US 5,943,290), Joshi (US 5,650,754), and Dent (US 7,133,647). Applicant respectfully requests reconsideration and withdrawal of this rejection for at least the following reasons.

In order for a claim to be properly rejected under 35 U.S.C. §103, the teachings of the prior art reference must suggest all features of the claimed invention to one of ordinary skill in the art. *See, e.g., In re Dow Chemical*, 837 F.2d 469, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988); *In re Keller*, 642 F.2d 413, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981).

In page 5, the Office Action asserts that Antoniak discloses a transceiver can operate as full-duplex (i.e. data transmission in both directions simultaneously) or half-duplex (i.e. data transmission in both directions but not at the same time) (see paragraph [0009]), i.e. the modes of operation are interchangeable, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the diplexer for full duplex operation in Isley, Je. Et al. with a switch for half-duplex operation. Applicant respectfully disagrees.

In claims 1 and 9, the claimed switch connects the medium to an up-converter or a down-converter, for transmitting a radio frequency signal or receiving the communication signal in different time periods. Clearly, the claimed switch directs the signal transmission in both directions. In Isley, the diplexer 36 is used only for receiving signal (column 5, lines 17-23) and no related description discloses, teaches or suggests that the diplexer 36 can transmit the signal to the antenna 14, which is analogous to the claimed “medium.” Furthermore, the diplexer 36 cannot connect antenna 14 (medium) to the upconverter modulator 32 (up-converter) or the mixer 26 (down-converter) due to the architecture shown in Fig. 1 of Isley.

Referred to paragraph [0009], Antoniak relevantly discloses the half-duplex operation. However, the half-duplex operation cannot be applied in dual direction signal transmission. In paragraph [0136], the half-duplex operation is applied in data transmission for the master unit and the slave unit when a single carrier frequency is available. Consequently, there is no teaching, suggestion or disclosure in Antoniak to indicate that the half-duplex operation can be analogous to the data transmission in both directions – i.e., receiving and transmitting. Thus, the teaching of Isley in view of Antoniak suggests, at most, that the data transmission ***in one direction*** can be half-duplex or half-duplex.

In page 4, the Office Action interprets the numeral 20 of Isley as the claimed digital circuit. Applicant disagrees. In claims 1 and 9, the claimed digital circuit processes only digital signal. In contrast, the processor board 20 of Isley processes both analog signal and digital signal (referred to elements 44 and 46). Therefore, the processor board 20 does not disclose the claimed digital circuit.

“The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.” In re Fritch, 972 F.2d 1260, 1266, 23 U.S.P.Q.2d 1780 (Fed Cir. 1992). In page 6, the Office Action asserts that it is implicit that the transceiver/modem of Isley et al. in view of Antoniak et al. requires clock signals, and that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Robison et al. with Isley et al. in view of Antoniak et al. by implementing the transceiver of Isley et al. in view of Antoniak as an integrated circuit with the separate ground reference (as taught by Robinson et al.) in order to reduce the size of the transceiver while minimizing the noise between the digital and analog portions of the integrated transceiver circuit. Applicant agrees that the transceiver/modem of Isley et al. in view of Antoniak et al. requires clock signals, but disagree that the modification of separate ground can be combined to Isley or Antoniak.

In Figs. 5-6 and paragraphs [0071]-[0075], only a ground layer 262 is disclosed and the elements mounted on substrate board 248 can be connected only to the ground layer 262, if necessary. Antoniak did not suggest the need of the modification of separate ground and did not provide motivation to modify the ground layer 262 with separate ground. Furthermore, Isley also did not suggest the need of the modification of separate ground. Consequently, the combination of Isley and Antoniak in view of Robinsion does not render claims 1 and 9 obvious, and the rejection should be withdrawn.

For the reasons stated above, it is Applicant's belief that all the limitations of claims 1 or 9 of the present application are not disclosed by the collective teachings of all cited references. Therefore, even if the references could be properly combined, the resulting combination still fails to render obvious all claimed combinations. For at least these reasons, independent claims 1 and 9 are allowable over the cited references. Insofar as all remaining claims depend from claim 1 or claim 9, all remaining claims are also in condition for allowance. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

CONCLUSION

In view of the foregoing remarks, Applicants respectfully request the Examiner's reconsideration of the application and the timely allowance of claims 1-4, 6-12 and 14-16. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

A credit card authorization is provided to cover the fee associated with the accompanying RCE application. No additional fee is believed to be due in connection with this submission. If, however, any additional fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

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